REMARKS

General:

Claims 22-26 are pending in this application. Claims 22-26 stand rejected.

Finality of the office action:

The office action states that it is made final because "applicant's amendment necessitated the new ground(s) of rejection presented in this office action." By applicants' amendment, claim 21 was canceled, claims 22 and 23 were rewritten in independent form, and claims 24 and 25 were unchanged. Claim 26, which previously defined a cutting tool comprising a tool body as recited in claim 21, was amended to define a cutting tool comprising a tool body as recited in claim 23. None of these amendments necessitated any new ground of rejection, and no new ground of rejection arising from the amendments was in fact made. The ground for making the rejection final is therefore clearly erroneous, and withdrawal of the finality of the rejection is requested.

35 U.S.C. § 102:

Claims 22 and 26 stand rejected as anticipated by U.S. Patent No. 2,503,951 (Kelly et al.).

The rejection of claim 26 is traversed. Kelly does not teach the feature of previous claim 23, requiring a taper headed screw in a threaded hole that is straddled by the isolating channel, added to claim 26 by applicants' amendment, and the examiner has repeatedly admitted that Kelly does not teach that feature. Thus, the anticipation rejection of claim 26 is improper and should be withdrawn.

With respect to claim 22, the examiner argues that the tapered bore 18 in Kelly is part of the isolation channel and that "each side of the taper is inclined towards a recess of the opposite side." As pointed out in applicants' previous response, that is not what claim 22 says. Claim 22 requires that the isolating channel is inclined, not merely that one side of the channel is inclined. It is noted that the examiner's "Response to Arguments" does not address applicants' arguments, but merely quotes part of applicants' conclusion, and repeats

the examiner's previous, and previously refuted, assertion. The substance of applicants' argument therefore stands unanswered and unrebutted. As such, there is no valid ground of rejection against claim 22, and claim 22 should be allowed.

The examiner points out that *one wall* of Kelly's slot is inclined at a shallow angle in the direction specified in claim 22 and apparently treats that as if it were the same as claim 22's requirement that *the channel* is inclined at a shallow angle. With all due respect to the examiner, that is not a reasonable interpretation of the claim language. It is believed to be clear from the specification read as a whole, including the descriptions of the function of the channel in the embodiments, that the claim language must be understood as meaning that the channel, *seen as a whole*, is inclined at a shallow angle.

In light of this, the deficiency of the rejection is easily demonstrated. The examiner argues that each side of the tapered bore 18 in Fig. 5 of Kelly "is inclined at a shallow angle towards a recess [24] of the opposite side" "in a direction looking into the page of Figure 1." From this the examiner infers that "the isolating channel is inclined at a first shallow angle to approach the recess in a direction away from an open end of the isolating channel" as required by claim 22. But the tapered bore 18 in Kelly is symmetrically positioned between two recesses 24. Therefore, based on the examiner's position, the tapered bore 18 is inclined both to the left and to the right in a direction into the page. That is clearly not right. Therefore, at least one of the examiner's initial assumptions is incorrect and, as a result, the rejection is improper, and claim 22 should be allowed.

35 U.S.C. § 103:

Claims 23, 24, and 25 stand rejected as obvious over Kelly in view of U.S. Patent No. 867,275 (Hunter).

Kelly shows a cylindrical cutter, with several flutes 15 extending axially along the cylindrical outer face. Each flute 15 receives a tooth segment 20. In Fig. 5, the flutes are of dovetail cross section, and the tooth segments must be inserted axially. Between two adjacent flutes 15 is an axial slot 17 passing through an axial tapered bore 18. A tapered pin 19 is driven into each tapered bore 18 to spread the metal of the cutter apart and clamp the tooth segments in the flutes 15. The tapered pin 19 extends the entire length of the bore 18

and, as far as can be determined from the hidden detail in Fig. 2, engages the tapered bore over the entire length of the cutter. That ensures that the tooth segments are gripped uniformly over their entire axial length.

Hunter describes a circular saw with teeth 7 seated in sockets 3. The teeth are inserted radially, and are secured by keys 8, 8' against axial displacement. Tapered slots 14 are provided between adjacent sockets 3. The tapered slot 14 has a threaded socket 14' in the inner end. A tapered pin 15 with a threaded tip is screwed into the socket 14' and tightened to spread the metal of the saw blade and clamp the teeth 7 in the sockets 3.

The examiner states that Kelly shows some of the features recited in claims 23 to 25, and Hunter shows others of the features recited in claims 23 to 25. It is not clear that the examiner is entirely correct. The examiner says it "is clear from figure 1 and 5 [of Kelly], that the diameter of the pin head (19) is larger than a width of the isolating channel." Figures 1 and 5 of Kelly show that the pin head is wider than the slot 17. However, the examiner's position elsewhere relies on arguing that the bore 18 of Kelly corresponds to the isolating channel of the claims, and it is clear from Figure 2 of Kelly that the head of pin 19 is not larger than the bore 18. Thus on the examiner's own argument, Kelly does not show a pin with a head wider than the isolating channel.

Having cited separately to features of Kelly and features of Hunter, the examiner says that "therefore" it would have been obvious to replace Kelly's tapered pin with Hunter's taper-headed screw "for the purpose of having a positive engagement between the screw and the tool body (the pin may have the tendency to pop out)."

In response to one part of applicants' previous arguments, the examiner asserts that "there is nothing preventing [Kelly's pin 19] from pulling out and it is well known in the art that threadings are one sure way of fixing two items in a desired position." That is not correct. It is well known in general that threaded fittings can come unscrewed, especially in vibrating environments. Absent any reason to suppose that Kelly's pin 18 would pull out before the teeth need to be removed for sharpening, and absent any reason to suppose that threaded pins would not come unscrewed, there is no motivation to substitute threaded pins for taper pins.

In any case, the examiner has not addressed the other part of applicants' argument. Kelly's and Hunter's structures are fundamentally different. Kelly's pin 19 and Hunter's pin 15 perform subtly different functions in very different ways. Kelly uses a smoothly tapered pin extending axially to provide a uniform pressure along a considerable axial length. Hunter uses a pin with a screw end and a head end extending radially to provide single point pressure in a device that is short axially. The examiner has not shown any suggestion how a person of ordinary skill could have combined the very different structures of Kelly and Hunter so as to produce a tool body having the combination of features recited in claim 23. Absent any showing of *prima facie* obviousness, and with applicants' argument standing unrebutted, claim 23 should stand allowed, together with claims 24-26.

In fact, the examiner's proposed modification of Kelly would not have been obvious. The long, smoothly tapered pin of Kelly provides uniform clamping pressure along the whole length of the pin 19 and the tooth segments 20. That is clearly desirable for Kelly's device. The taper headed screw 15 of Hunter provides clamping pressure only at the tapered head. Because of the arrangement of the screw threads, the end of Hunter's slot with the screw thread cannot be allowed to spread, so the slot 14 gapes along the length of the pin by pivoting about the notch 14". Applied to Kelly, that would result in clamping only at one end of the tooth segments 20, which would be unsatisfactory and probably unworkable. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP § 2143.01, citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

For all of the above reasons, it is believed that claim 23, together with claims 24-26, would not have been obvious over the cited references.

Conclusion:

In view of the foregoing, reconsideration and withdrawal of the examiner's rejections, and an early notice of allowance of all claims 23-26, are earnestly solicited.

Should the Examiner have any questions or comments regarding applicants' amendments or response, the Examiner is asked to contact the applicants' undersigned attorney.

Respectfully submitted,

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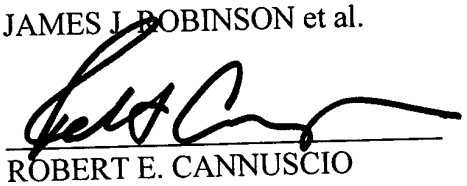
By: 

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